



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/606,350	06/26/2003	Koji Maekawa	1767-116	3653
23117	7590	07/12/2006	EXAMINER	
NIXON & VANDERHYE, PC 901 NORTH GLEBE ROAD, 11TH FLOOR ARLINGTON, VA 22203			GABLER, PHILIP FRANCIS	
			ART UNIT	PAPER NUMBER
			3637	

DATE MAILED: 07/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/606,350

Applicant(s)

MAEKAWA ET AL.

Examiner

Philip Gabler

Art Unit

3637

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 May 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) 15 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 and 16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 6, 7, and 8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
3. Claims 6, 7, and 8 recite "an aperture port" and "a resonance" (or "a pipe resonance") on their third, second, and third and second lines respectively. It is unclear whether these are the same aperture ports and resonances recited in claim 1 or new and separate limitations.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-3, 6-14, and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by Wilke (US Patent Number 5710395).
6. Regarding claims 1 and 3, Wilke (Figure 7) discloses a speaker-provided mounting table (10) comprising a pedestal (14), a hollow-shaped support member (13,

15, 70, etc.) for supporting the pedestal, the support member also capable of functioning as an acoustic pipe or acoustic capacity and a speaker unit (50 including speaker housing, internal components, mounting hardware, etc.) independent of the pedestal being equipped with a speaker (50) and attached on the outside of the support member (attached to the outside at flange 40), wherein the support member comprises an opening (through which body of speaker 50 protrudes) capable of receiving sound generated by the speaker unit, and an aperture port (80) capable outputting the sound, whereby sound outputted through the opening of the support member from the speaker unit can cause resonance in the support member, and be outputted from the aperture port of the support member.

7. Regarding claims 2, 8, and 9, Wilke further discloses an acoustic capacity (air contained in interior of chamber 5) capable of causing a resonance with a vibration mass (cone of speaker 50) of the speaker unit associating with the acoustic pipe.

8. Regarding claim 6, Wilke further discloses an acoustic capacity cavity (interior of chamber 5) capable of emitting sound generated in response to resonance caused therein and an aperture port (80) for outputting the sound emitted by the acoustic capacity cavity.

9. Regarding claim 7, Wilke further discloses the support member is structure to be capable of causing a pipe resonance therein and comprises an aperture port (80) capable of outputting sound generated by the pipe resonance.

10. Regarding claim 10, Wilke further discloses the support member is configured to be driven by the speaker unit so that the support member has a function of any one of a

Helmholtz resonance, a pipe resonance, or a resonance being caused on both of the speaker and the acoustic capacity. [Note that with a port as shown by Wilke, a Helmholtz resonance is possible with the air (being compressible) in the support member acting as a spring and the air at the port acting as a mass.]

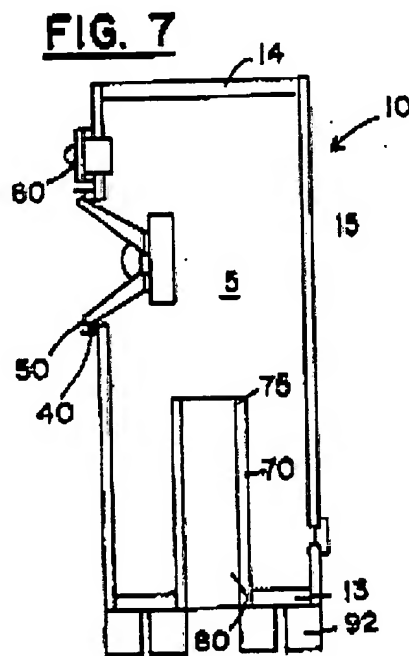
11. Regarding claims 11-13, Wilke further discloses support member formed to have a frequency to cause a (pipe or Helmholtz) resonance, the frequency being set to replay a lower-band sound (see for example column 5 lines 11-12). [Again, note that with a port as shown by Wilke, a Helmholtz resonance is possible with the air (being compressible) in the support member acting as a spring and the air at the port acting as a mass.]

12. Regarding claim 14, Wilke further discloses a distance between a speaker and aperture port is determined in agreement with frequency and resonance considerations (see for example column 2 lines 54-56 and column 5 lines 7-12).

13. Regarding claim 16, Wilke discloses a speaker-provided mounting table (10) comprising a pedestal (14), a hollow-shaped support member (13, 15, etc.) for supporting the pedestal; and a speaker unit (50 including speaker housing, internal components, mounting hardware, etc.) independent of the pedestal being equipped with a speaker (50) and attached on the outside of the support member (attached to the outside at flange 40), wherein the support member comprises an opening (through which body of speaker 50 protrudes) capable of receiving sound generated by the speaker unit, and an aperture port (80) capable outputting the sound, whereby sound outputted through the opening of the support member from the speaker unit can cause

Art Unit: 3637

resonance in the support member, and be outputted from the aperture port of the support member, wherein the support member is structured to function as an acoustic pipe and an acoustic capacity such that a pipe resonance can be effected by the support member and a Helmholtz resonance can be effected by the acoustic capacity, and wherein a resonance frequency of the pipe resonance and the Helmholtz resonance is based on the acoustic capacity and a cross section and a length of the acoustic pipe resulting in a wide frequency band for low frequency output (Wilke's structure is capable of functioning as an acoustic pipe and Helmholtz resonator for low frequency output as described above, and the resonance frequencies would necessarily be based on the capacity and dimensions of the structure).



Wilke '395 Figure 7

Claim Rejections - 35 USC § 103

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

15. Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wilke in view of Christensen (US Patent Number 5295194). Wilke discloses a table as recited in claim 1 but does not disclose specifics of his speaker. The use of both dynamic electricity speakers and piezoelectric speakers however, is well known in the art as evidenced by Christensen who discloses that dynamic and piezoelectric speakers are the most common and least expensive of current speaker designs (see column 3 lines 1-4). Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to make use of either dynamic electricity speakers or piezoelectric speakers as taught by Christensen in Wilke's table based on the needs and desires of a user.

Response to Arguments

16. It is noted that claim 15 should be identified with the "withdrawn" status identifier in any listing of claims in future correspondence.

17. Applicant's arguments filed 22 May 2006 have been fully considered but they are not persuasive. Wilke does in fact disclose a speaker attached to the outside of a support member (the speaker is mounted to flange 40, which is clearly on the outside of

the support member), as well as an opening and aperture capable of receiving and outputting sound as described above. It is further noted that pipe 70 (as well as element 13, etc.) is considered a portion of the support member.

18. The remainder of Applicant's arguments with respect to the claims have been considered but are moot in view of the new grounds of rejection.

Conclusion

19. Applicant's amendment necessitated the new grounds of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

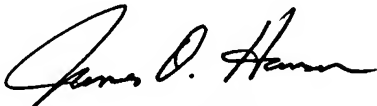
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Philip Gabler whose telephone number is (571) 272-

6038. The examiner can normally be reached on Monday through Friday, 8:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lanna Mai can be reached on (571) 272-6867. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

PFG *ib*
6/29/2006


JAMES O. HANSEN
PRIMARY EXAMINER